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AN ANALYSIS OF INDUSTRIAL GRIEVANCES  
WITH RESPECT TO SOURCE, SUBJECT  
MATTER AND LEVEL OF SETTLEMENT

A Thesis  
Submitted to the Faculty  
of  
Purdue University

by

Leo S. Soltys, Jr.  
41

In Partial Fulfillment of the  
Requirements for the Degree of  
Master of Science, Industrial Engineering

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~~Thesis~~  
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## ABSTRACT

The immediate and ultimate success of any work simplification or methods improvement scheme which the industrial engineer might seek to introduce could very well hinge on production workers whole heartedly accepting the program. A thorough familiarity with the nature of industrial grievances and what causes them could enable him to design his program in such a manner so as not to irritate an old or create a new labor relations sore spot.

This thesis represents an attempt to investigate the grievances which have arisen in some twenty companies during the period 1951 through 1954. The participants all had unionized bargaining units that ranged in size from 195 to 13,000 employees. Each of the plants was visited personally and the following data were recorded for each grievance on file:

1. Date originally filed
2. General grievance topic
3. Level of settlement

For each company participating, the following was recorded:

1. Type industry
2. Average size of bargaining unit for each year on which data were taken.
3. Whether or not incentives were used
4. Type grievance procedure
5. Population of community where plant was located
6. Affiliation of bargaining unit, if any

In order to have some basis of comparison between





companies, grievances in each category were recorded by number filed and number filed per thousand employees. The latter was called the grievance average. Based on all of the data compiled, the mean grievance average rose steadily from 21.28 in 1951 to 57.88 in 1954. Over the entire period, problems dealing with Seniority, Wages, Job Classification and Equalization of Hours were, in the order mentioned, the most prolific sources of grievances in the industries studied.

In an effort to determine which factors had the most effect on a company's grievance average, an analysis of variance was conducted on the 1953 and 1954 data. The following results were obtained:

1. Differences between grievance averages in 1953 and 1954 were not significant at the 5% level.
2. Differences between grievance averages in small companies and large companies were significant at the 5% level.
3. Differences between grievance averages in companies with and without incentive plans were not significant at the 5% level.

From this, it was concluded that companies of one thousand employees or larger had a higher grievance average than companies with less than a thousand employees.

From data on the level of settlement, it was found that from 1951 through 1953 there was a tendency for more and more grievances to continue on through steps in the procedure to the upper management levels before being settled. However, in 1954 this trend was reversed.

Investigation of the monthly grievance average for



the period immediately prior to contract expiration showed that only one of five companies experienced an appreciable increase in grievance average during this period. Therefore, it was not at all possible to back the theory that it is common policy for labor to use the grievance procedure to prod management prior to, and during, contract negotiations.

In conclusion, the author is aware that there are many other factors which could have as much, or even more, bearing on the grievance average than did those investigated. Among these could be included affiliation of the bargaining unit, past history of labor-management relations, selection and placement policy, type of working environment and the size of the community in which the plant is located. Therefore, if further research is conducted in this area, the sample size should be considerably larger so that some of the above mentioned factors can be included in the statistical analysis without reducing the number of readings in each cell below an acceptable minimum.



## INTRODUCTION

The problem of controversies between employers and employees is as old as industry itself. In the days of the small scale employer, there was no urgent need for a formal grievance procedure since it was possible to thrash out differences of opinion face to face. However, long after the pendulum had swung to the point where the majority of industrial workers rarely, if ever, had personal contact with their employers, the grievance machinery was still practically non-existent. It was surprising to note that the country-wide strike in the steel industry during 1919 emanated from unadjusted grievances. These had piled up due to the fact that no formal avenues of redress were in existence for the use of the aggrieved employee. This, indeed, was a heavy price to pay for poor management practices.

World War II contracts, with their clauses forbidding strikes, brought into prominence the formal procedure which is so prevalent in today's industrial contracts. This usually comprises several in-plant steps and then the submission of the unsettled dispute to an arbitrator, whose decision is final and binding on both parties. However, there was such an epidemic of insignificant cases being carried through to arbitration that the National War Labor Board saw fit to



discontinue its practice of furnishing the impartial umpire without charge.

In an effort to point out some weaknesses in the use of the arbitration process to settle labor-management disputes, Davey <sup>1</sup> gives four major hazards. A summary of two of these follows:

1. A tendency to use the arbitration process primarily as a face-saving mechanism, instead of attempting to improve the handling of disputes at the lower levels of the grievance procedure.
2. A failure to recognize that too frequent arbitration may well prove as destructive to sound labor relations as neglecting to provide for arbitration machinery at all.

A survey <sup>2</sup> of 69 General Motors plants for a 15 month period ending late in 1943 showed that over 40,000 grievances were presented. Of these, 45.5 per cent were settled by foremen, 46.5 per cent by management-shop committees, 7 per cent by the appeal boards and less than one per cent by arbitrators.

Even in the steel industry, where, the number of arbitrations has received considerable publicity, it has been shown<sup>3</sup> that in the period from 1942 to 1951, arbitrators rendered

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1. Davey, E.W., Contemporary Collective Bargaining, New York, Prentice-Hall, Inc., 1951, p. 297.

2.. The Conference Reporter, vol. I, no. 5; May 29, 1944; American Management Association.

3. Arbitration of Labor-Management Grievances, Bulletin No. 1159, United States Department of Labor, p.3.







decisions on less than six percent of the 17,000 grievances filed in the plants of the Bethlehem Steel Company.

The instances cited above gave birth to the idea that far too much emphasis has been placed on the analysis, publication and interpretation of arbitration cases, while little or no information has been promulgated with reference to the more than 95 percent of the disputes which were resolved at some step of the in-plant grievance procedure.

One could argue that the mere fact that the principals were able to arrive at a satisfactory settlement without finding it necessary to solicit outside help, minimizes the value of such a grievance in a study of universal interest. This point of view is open to challenge today in industry since it is recognized that the rules governing day-to-day working relations in the plant can best be worked out locally by those who are on the scene. Settling the dispute at the lowest possible step in the procedure is not only beneficial to morale and, with it, productive efficiency, but also is far more economical due to the fact that the upper levels of Labor and Management are not saddled with the necessity for costly, time-consuming meetings. However, before this can come to pass, first line supervision must be carefully briefed in interpretation of the contract by those who had a hand in formulating the agreement because, as Lapp<sup>4</sup> puts it, "Words are slippery things at best, and at their worst

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<sup>4</sup>. Lapp, J. A., How to Handle Labor Grievances, National Foremen's Institute, Inc., 1945, p. 30.



they can create confusion of intent."

Just what sort of information could one glean from a perusal of a company's grievances? Certainly, it would be possible to determine when the grievance was filed, at what step in the procedure settlement occurred and just what was the bone of contention. Now, having obtained this information, would it prove to be of any practical value?

To answer this question, let us suppose that Alpha Beta Gamma Company's labor agreement expires shortly, and soon they will be in the midst of contract negotiations. Without doubt, a survey of the grievances filed during the tenure of the existing contract could very well indicate which portions of the agreement have most frequently been subject to controversy. The next step would be an attempt to discover why. It could very well be that the wording is slipshod, leaving the section wide open for subjective interpretation. Then again, disputes arising from this particular subject matter might be very prevalent in other concerns whose bargaining units are affiliated with the same national or international organization. This information could be obtained from consulting an analysis such as this one.

Another application for this information would be in the field of Supervisor Training. Here it would be helpful in determining on which areas of contract interpretation emphasis should be placed. Then, the foreman would be forewarned as to "popular" grievance topics in Industry as



a whole and could enjoy the benefit of advice from persons expert in the field of Human Relations.

One could hazard the theory that when the collective bargaining agreement is first put into effect, there might be a rash of misunderstandings resulting in an upswing in the grievance rate. Then, after both sides have lived with the contract for awhile, this theory further proposes that the number of grievances would drop back to some "normal" level. Another school of thought is of the belief that this upswing occurs in the two to three month period immediately preceding negotiations. Investigation of the monthly rate for the periods in question might indicate whether either of these theories hold true for the companies in our sample.

It has been demonstrated by Whitehill<sup>5</sup> that communication in industry today is a highly complex, multi-dimensional problem becoming more difficult as the size of the organization increases. Just what effect, if any, does this have on the grievance rate? Could it be that some employees look upon the grievance procedure as their only vehicle for recognition? Comparing the grievance rates in small, medium and large size companies may shed some light on these questions.

It is also Whitehill's<sup>6</sup> contention that when the worker and the foreman can resolve most of their problems

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5. Whitehill, A.P., Personnel Relations, McGraw-Hill, 1955, p. 313.

6. Ibid., p.480





through on-the-spot conferences, there is a good chance that the personnel relations program and policies are sound, reasonable, and acceptable to the parties involved. Such a situation would be likely to reflect organizational and individual equilibrium with accompanying high levels of morale. However, if the grievances cannot be resolved here and move on through the machinery to arbitration, the chances are that a condition of disequilibrium and impaired morale will be found to exist in the organization. While no attempt will be made in this work to evaluate morale, the level of settlement of the grievances will be recorded in order to show the percentages which are resolved at each step in the procedure.

Over the period of the past several years what trends can be detected in the number and type of grievances filed?

The Department of Labor's report<sup>7</sup> on arbitrations in the steel industry listed Wages or Job Classification, Seniority and Discipline, in that order, as the issues giving birth to the most grievances. It will be interesting to see whether or not they continue to lead the pack when grievances at all levels of settlement have been considered.

What, if any, effect do wage incentive plans have on the overall number of grievances which a company's employees file? An effort will be made to compare and contrast the grievance averages of companies which do and do not employ wage incentives.

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7. Op. cit., p. 4





In this thesis, an endeavor will be made to arrive at answers to the aforementioned questions. No doubt, some will remain unanswered, but they may provide the stimulus for further research into this area of study.



## PROPOSED METHOD OF APPROACH

Initially, the proposed method of approach was to select randomly approximately one hundred companies in the United States and solicit from them data on grievances filed during the period 1948 through 1954. This was based on the rather naive assumption that it was common practice in industry to maintain up-to-date grievance records and to summarize them annually.

A preliminary survey of several near-by industries served to right this misconception and indicate that a change in the plan of attack was in order. First of all, in many companies, whose labor forces were not organized, no formal grievance procedure was in existence; and even where there was one, records were woefully incomplete. This immediately limited the participants to unionized companies. Secondly, grievance logs or annual summaries were maintained in only a few isolated cases. This necessitated poring over the actual grievances in order to compile the desired data. It also became apparent that the author, not the company, was the one who would have to perform this time taking task. Therefore, a personal visit to each plant would be necessary. With this in mind, in the interest of economy and time conservation, it was deemed advisable to limit the participants to those companies whose geographical



location was within a two hundred mile radius of Lafayette, Indiana.

Companies were then randomly selected from Poor's Register<sup>8</sup> and a list of fifty-four which were unionized and within two hundred miles was compiled. Of these, 21 bargaining units were CIO affiliated, 16 AFL, and 17 either independent or affiliated with some other national organization. Figure 1 shows a copy of the letter sent to each of these companies requesting their participation. Wherever possible, the correspondence was mailed to a person in the company. However, if the name was not ascertainable, it was sent to the "Director of Industrial Relations."

Table 1  
Answers Received from Industries  
Listed by Size

Size	No. Contacted	Yes	No	Not Answering	% Answering
0-600	16	6	4	6	62.5
600-2000	21	8	3	10	52.4
over 2000	17	6	4	7	58.8
Total	54	20	11	23	57.4

A study of the above shows that from those bothering to answer, we received about twice the number in the affirmative as we did in the negative. However, it was a bit disappointing that close to forty percent of those

<sup>8</sup>. Poor's Register of Directors and Executives, United States and Canada, 1955, Standard and Poor Corporation, New York, N. Y.



Figure 1  
PURDUE UNIVERSITY

Department of General Engineering  
Lafayette, Indiana

February 14, 1955

Dear Sir:

Would you be interested in learning how your employee grievance record stacks up beside other comparable companies?

We are conducting a study of industrial grievances, considering their source, subject matter, level of settlement, and any other pertinent aspects which may be analyzed from the data available. No doubt, you maintain records summarizing your own employee grievances and you have probably found this information particularly valuable when renegotiating labor contracts, formulating new policies, etc. It is our opinion that you could also benefit greatly from the knowledge of how your organization compares with others.

Company identities as well as specific information received will be considered completely confidential. In the event that you are willing to participate, you will receive a summary of all results together with your coded identification symbol in order that you may make the comparisons indicated above.

If you are willing to participate, will you kindly so indicate on the enclosed card? Please also show specific type of information available from your records and for what periods these records cover.

This project must be completed this semester. Will you please fill out the enclosed card and drop it in the mail today?

Very Sincerely yours,

Ralph E. Balyeat  
Supervisor of Industrial Relations Courses





contacted did not see fit to check "Yes" or "No" on the enclosed postal card and drop it in the mail.

Of the twenty companies who indicated a willingness to participate, six had bargaining units numbering 600 or less, eight between 600 and 2000, and six over 2000. The largest bargaining unit numbered approximately 13,000, while the smallest was 195.

Table 2  
Answers Received from Industries  
Listed by Contact

Contact	No. Contacted	Yes	No	Not Answering	% Answering
Name	39	17	10	12	69.3
Title	15	3	1	11	26.7
Total	54	20	11	23	61.2

It is of interest to note that nearly seventy percent of the individuals contacted by name took time to answer. On the other hand, when the correspondence was addressed to the title of office, less than thirty percent answered either way. This seems to indicate that when attempting to solicit the co-operation of industries as participants in a survey, one has a much better chance for success if he can address his request to some individual by name rather than sending it off to the official's title.

The twenty labor agreements in question all had formal grievance procedures with arbitration provisions. Following are examples of the levels where each of the



grievance steps are processed:

Three-Step Plan--8 Contracts

- |            |  |
|------------|--|
| Step ONE   | Foreman and Employee with or without Shop Steward                          |
| Step TWO   | Plant Superintendent, Employee, and Chief Steward                          |
| Step THREE | Top Management, Grievance Committee and International Union Representative |

Four-Step Plan--11 Contracts

- |            |  |
|------------|--|
| Step ONE   | Foreman and Employee with or without Shop Steward                        |
| Step TWO   | General Foreman, Employee and Chief Steward                              |
| Step THREE | Works Manager and members of Local Committee                             |
| Step FOUR  | Top Management Executives, Local and International Union Representatives |

Five-Step Plan--1 Contract

- |            |  |
|------------|--|
| Step ONE   | Foreman and Employee with or without Shop Steward  |
| Step TWO   | Departmental Foreman, Employee and Departmental Steward  |
| Step THREE | District Superintendent, Employee and Departmental Steward   |
| Step FOUR  | Division Manager, Division Grievance Committee and Union Regional Representative                   |
| Step FIVE  | Company President, Union Regional Director, President of Local Union, Division Grievance Committee |

It should be noted that each of these steps may be appealed to a higher level. This final step in all of the contracts studied is to an impartial arbitrator. In all cases, the decision of this arbitrator is binding on the parties and cannot be appealed to a higher authority except in cases of



fraud or where the arbitrator exceeds his jurisdiction.

In 19 contracts, the cost of arbitration was mentioned. Seventeen of these divided the expenses equally between the union and management. In the remaining two agreements, the entire cost of arbitration was the responsibility of the side losing the decision. However, in the event of a compromise, the expenses were divided equally.

Eight of the agreements have time limits set on the presentation and processing of grievances at the various steps. If management does not make an adjustment or give an answer within a specified period the grievance moves up to the next level of processing. On the other hand, in the event the grievance has been denied, the aggrieved or his representative must appeal within a specified period or else the grievance is considered to have been withdrawn. The time limits ranged from 24 hours to 30 days depending on the level where the grievance was being handled. Typically, the limits on the lower levels of the procedure are shorter than at the higher levels.

Grievance committee representatives are union members responsible for taking up grievances after they have passed through the lower levels of supervision. Most frequently, employees of the plant are designated as committee members. In twelve of the contracts, members of the committee are given time off with pay while handling grievances. Seven contracts stipulated that members would not be paid while on grievance work. The remaining contract made no mention of pay provisions for grievance committee members.



As was shown earlier, the twenty agreements included Three, Four, and Five-Step plans. This presented some difficulty in attempting to make comparisons between companies. Therefore, in an effort to establish a common ground, the last two plans were telescoped to three steps. The level of management involved was the factor used in determining the step. An illustration follows:

Management Level

Step ONE	Lower levels of supervision
Step TWO	Plant Superintendent, Works Manager or equivalent
Step THREE	Top Management

When one attempts to categorize grievances according to their subject matter, there is a possibility of arriving at well over a hundred different classifications. This would have proven to be much too unwieldly for tabulation purposes. Therefore, judgement was used to place each grievance in one of twelve different categories. In figure 2, these categories are listed along with types of grievances which went to make up each category.





Fig. 2  
Key to Grievance Categories

Category	Title and Topics Included
I	Company Policy <ul style="list-style-type: none"> <li>a) Pass procedure</li> <li>b) Leaves of absence</li> <li>c) Grievance procedure</li> <li>d) Past practice</li> <li>e) Posting of work schedules</li> </ul>
II	Discipline <ul style="list-style-type: none"> <li>a) Discharge</li> <li>b) Suspension from work</li> <li>c) Warnings</li> </ul>
III	Equalization of Hours <ul style="list-style-type: none"> <li>a) Overtime distribution</li> <li>b) Work allocation</li> <li>c) Minimum number of hours per week</li> </ul>
IV	Job Classification and Evaluation <ul style="list-style-type: none"> <li>a) Job content</li> <li>b) Labor grade</li> <li>c) Performance record</li> <li>d) Reclassification requests</li> <li>e) Interdepartmental jurisdictional disputes</li> </ul>
V	Miscellaneous
VI	Recognition and Representation <ul style="list-style-type: none"> <li>a) Failure to bargain in good faith</li> <li>b) Discrimination for union activity</li> <li>c) Failure to call in steward</li> </ul>
VII	Seniority <ul style="list-style-type: none"> <li>a) In promotion</li> <li>b) In shift preference</li> <li>c) In layoff</li> <li>d) In recall</li> <li>e) In bumping</li> </ul>
VIII	Supervision Working <ul style="list-style-type: none"> <li>a) Production or maintenance work being done by one not in bargaining unit</li> <li>b) Ex-foreman re-entering bargaining unit</li> </ul>



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Category	Title and Topics Included
IX	Vacation <ul style="list-style-type: none"><li>a) Eligibility for</li><li>b) Length of</li><li>c) Pay for vacations and holidays</li></ul>
X	Pay <ul style="list-style-type: none"><li>a) Average hourly earnings</li><li>b) Piece rate</li><li>c) Expected earnings</li><li>d) Set-up premiums</li><li>e) Retroactive pay</li><li>f) Down-time pay</li><li>g) Call-in pay</li></ul>
XI	Working Conditions <ul style="list-style-type: none"><li>a) Safety infractions</li><li>b) Employee discomfort</li><li>c) Health hazards</li><li>d) Requests for additional help</li></ul>
XII	Standards <ul style="list-style-type: none"><li>a) Requests for restudy of job</li><li>b) Standard times too tight</li><li>c) Contention job should <u>not</u> be restudied</li><li>d) Accusations of speed-up</li></ul>



Mere tabulation of the number of grievances filed in a particular category during the time of a calendar year would prove inadequate for comparison purposes. This was due to the size inequities of the participants. In order to overcome this obstacle, it was decided to base a company's score on a grievances-per-employee basis, using as a criterion the average employment for the year in question. This proved satisfactory except for the small numbers involved, so a change was made to grievances-per-1,000 employees. In the future, this will be referred to as "The Grievance Average."



### The Statistical Problem

Upon completion of the tabulation of the cases and the computation of each participant's grievance average, the companies were grouped according to size and wage plan utilized for the calendar years in which complete data had been taken. This resulted in a breakdown of the data into the following eight cells:

1. Large Companies with Incentive Plans in 1954
2. Large Companies without Incentive Plans in 1954
3. Small Companies with Incentive Plans in 1954
4. Small Companies without Incentive Plans in 1954
5. Large Companies with Incentive Plans in 1953
6. Large Companies without Incentive Plans in 1953
7. Small Companies with Incentive Plans in 1953
8. Small Companies without Incentive Plans in 1953

This entailed an arbitrary decision as to the dividing line between large and small organizations. It is realized that it would have been far better to have a transition group of medium sized companies in between the two extremes. However, the relative smallness of the sample size precluded stratification to more than two groups. Therefore, all those with less than one thousand employees were classified as "small"; and those with a thousand or more employees were placed in the "large" category.

An analysis of variance was to be carried out on the grievance averages recorded in each cell. This was to determine whether differences could be attributed to





company size, wage plan in use, the year in question, or to some interaction between two of the main effects.

Further discussion of this phase of the research will be found in Appendix A, entitled "Solution of the Statistical Problem".



## INDIVIDUAL COMPANY DATA

On the pages that follow will be found information on each of the participants. They have been coded from A through T in order to conceal their identity. This was the stipulation under which the author was permitted access to the grievances in order to compile the necessary data. The smallest company studied leads off and they increase in size as one proceeds through this section. Separate pages have been used due to the fact that each participant has requested a copy of his data in order to supplement his own grievance records. The remarks following the data on some of the companies are subjective comments by the author based on impressions garnered during plant visits and conversations with Industrial Relations personnel. They do not necessarily represent the viewpoint of management at the company in question.



Company A

Type Industry:           Woodworking, job shop.

Size:                    195 employees.

Bargaining Unit:        Internationally affiliated.  
Union shop.

Wage Plan:              No incentives.

Population of Location: 2500

Table 3

Number and Average of Grievances in Each Category				
Category	1954		1953	
	No.	Avg.	No.	Avg.
I	1	5.13	1	5.13
IV			1	5.13
VII			1	5.13
VIII			1	5.13
X	1	5.13	1	5.13
Total	2	10.26	4	20.52

Table 4

Number and Percent of Total Grievances at Each Level of Settlement				
Level	1954		1953	
	No.	%	No.	%
ONE			1	25.0
TWO			3	75.0
THREE	2	100.0		
ARBIT				
TOTAL	2	100.0	4	100.0



Company B

Type Industry: Metal working, job shop.  
Size: 200 employees  
Bargaining Unit: Internationally affiliated  
Modified union shop.  
Wage Plan: Incentives  
Population of Location: 5500

During the past five years only one formal grievance has been filed. This was in 1952, and had to do with Seniority (Category VII). Settlement was effected at Step TWO. Therefore Company B's Grievance Average is zero except for the year 1952 when it was 5.00.

There are several circumstances which could contribute to this remarkably low grievance rate. The level of employment is very steady and turnover is practically non-existent. This is emphasized by the fact that there are only ten percent of the employees with less than five years seniority while more than twice that number have twenty or more years seniority. The size of the organization and the attitude of its top management permit the differences of opinion that do arise to be settled verbally on the spot.





Company C

Type Industry: Steel, continuous  
 Size: 275 employees  
 Bargaining Unit: Internationally affiliated  
 Maintenance of membership  
 Wage Plan: Incentives  
 Population of Location: 60,000

Table 5  
 Number and Average of Grievances in Each Category

Category	1954		1953		1952	
	No.	Avg.	No.	Avg.	No.	Avg.
I					3	10.90
II	1	3.64			3	10.90
III			1	3.64		
IV			3	10.90	1	3.64
VII	2	7.27	3	10.90		
VIII	1	3.64				
IX	2	7.27				
X	2	7.27	4	14.54	3	10.90
XI	1	3.64	1	3.64		
Total	9	32.72	12	43.62	10	36.34

Table 6  
 Number and Percent of Total Grievances  
 at Each Level of Settlement

Level	1954		1953		1952	
	No.	%	No.	%	No.	%
ONE			4	33.3	2	20.0
TWO	1	11.1	3	25.0	2	20.0
THREE	8	88.9	5	41.7	4	40.0
ARBIT					2	20.0
TOTAL	9	100.0	12	100.0	10	100.0



Company D

Type Industry: Electrical and metal working  
 Size: 525 employees  
 Bargaining Unit: Internationally affiliated  
 Union shop  
 Wage Plan: Incentives  
 Population of Location: 15,000

Table 7  
 Number and Averages of Grievances in Each Category

Category	1954		1953		1951	
	No.	Avg.	No.	Avg.	No.	Avg.
I	1	1.89				
II	1	1.89	1	1.89		
III			1	1.89		
IV	2	3.78	3	5.67	2	3.78
VII			1	1.89		
IX			1	1.89		
X	2	3.78	2	3.78	1	1.89
TOTAL*	6	11.34	9	17.01	3	5.67

Table 8  
 Number and Percent of Total Grievances  
 at Each Level of Settlement

Level	1954		1953		1951	
	No.	%	No.	%	No.	%
ONE	1	16.7	2	22.2	2	66.7
TWO	3	50.0	6	66.7		
THREE					1	33.3
ARBIT	2	33.3	1	11.1		
TOTAL*	6	100.0	9	100.0	2	100.0

\*No grievances were filed during the year 1952.



Company E

Type Industry: Chemical, continuous  
 Size: 480 employees  
 Bargaining Unit: Independent  
 Maintenance of membership  
 Wage Plan: No incentives  
 Population of Location: Over 100,000

Table 9  
 Number and Average of Grievances in Each Category

Category	1954		1952		1951	
	No.	Avg.	No.	Avg.	No.	Avg.
VII	5	10.40	3	6.24	1	2.08
IX					1	2.08
X	1	2.08	1	2.08	1	2.08
XI	1	2.08			1	2.08
TOTAL*	7	14.56	4	8.32	4	8.32

Table 10  
 Number and Percent of Total Grievances  
 at Each Level of Settlement

Level	1954		1952		1951	
	No.	%	No.	%	No.	%
ONE	6	85.7	2	50.0	2	50.0
TWO	1	14.3	1	25.0	2	50.0
THREE			1	25.0		
ARBIT						
TOTAL*	7	100.0	4	100.0	4	100.0

\*No grievances were filed during the year 1953.



COMPANY F

Type Industry: Chemical, continuous  
 Size: 510 Employees  
 Bargaining Unit: Internationally affiliated  
 Preferential shop  
 Wage Plan: No incentives  
 Population of Location: 10,000

Table 11  
 Number and Average of Grievances in Each Category

Category	1954		1953	
	No.	Avg.	No.	Avg.
II			2	3.92
IV	1	1.96	2	3.92
X			4	7.84
XI			4	7.84
TOTAL	1	1.96	12	23.52

Table 12  
 Number and Percent of Total Grievances  
 at Each Level of Settlement

Level	1954		1953	
	No.	%	No.	%
ONE				
TWO	1	100.0	2	16.7
THREE			10	83.3
ARBIT				
TOTAL	1	100.0	12	100.0





Company C

Type Industry: Electrical, semi-continuous  
 Size: 650 employees  
 Bargaining Unit: Independent  
 Maintenance of membership  
 Wage Plan: Incentives  
 Population of Location: 40,000

Table 13  
 Number and Average of Grievances in Each Category

Category	1954		1952		1951	
	No.	Avg.	No.	Avg.	No.	Avg.
VII	1	1.54	2	3.08	1	1.54
TOTAL	1	1.54	2	3.08	1	1.54

All four of the above grievances were settled at Step TWO. There were no grievances filed in 1953. The exceptionally low grievance rate has been attributed to a very stable level of employment and the overwhelming confidence which the employees place in the company president. While visiting the plant it was noted that working conditions were well high ideal including completely air conditioned work centers. In the past, management has presented the workers with several unsolicited fringe benefits. All of this may add up to the reason for the harmonious atmosphere which exists here.



Company H

Type Industry: Metal Working, job shop  
 Size: 650 employees  
 Bargaining Unit: Internationally affiliated  
 Maintenance of membership  
 Wage Plan: Incentives  
 Population of location: 40,000

Table 14  
 Number and Average of Grievances in Each Category

Category	1954		1953	
	No.	Avg.	No.	Avg.
I	2	3.08		
II	10	15.40	7	10.78
III	13	20.00	4	6.16
IV	13	20.00	12	18.48
V	1	1.54	2	3.08
VI	2	3.08		
VII	7	10.78	5	7.70
VIII	1	1.54		
IX	1	1.54		
X	27	41.60	17	26.18
XI	14	21.55	6	9.24
XII	39	60.00	21	32.32
TOTAL	130	200.00	74	113.94

Table 15  
 Number and Percent of Total Grievances  
 at Each Level Of Settlement

Level	1954		1953	
	No.	%	No.	%
ONE	32	24.6	30	40.5
TWO	50	38.5	19	25.7
THREE	42	31.9	22	29.7
ARBIT			3	4.1
TOTAL	130	100.0	74	100.0



Company I

Type Industry: Metalworking, continuous  
 Size: 950 employees  
 Bargaining Unit: Internationally affiliated  
 Union Shop  
 Wage Plan: No incentives  
 Population of Location: 35,000

Table 16  
 Number and Average of Grievances in Each Category

Category	1954		1953		1952		1951	
	No.	Avg.	No.	Avg.	No.	Avg.	No.	Avg.
II	2	2.10	7	7.78	5	5.32	6	6.25
VII	12	12.60	22	24.45	3	3.19	6	6.25
IX			5	5.56	8	8.51		
TOTAL	14	14.70	34	37.79	16	17.02	12	12.50

Table 17  
 Number and Percent of Total Grievances  
 at Each Level of Settlement

Level	1954		1953		1952		1951	
	No.	%	No.	%	No.	%	No.	%
ONE	10	71.4	28	82.4	9	56.2	8	66.7
TWO	4	28.6	6	17.6	6	37.5	4	33.3
THREE					1	6.3		
ARBIT								
TOTAL	14	100.0	34	100.0	16	100.0	12	100.0



Company J

Type Industry: Metalworking, continuous  
 Size: 950 Employees  
 Bargaining Unit: Internationally Affiliated  
 Maintenance of membership  
 Wage Plan: No incentives  
 Population of Location: over 100,000

Table 18  
 Number and Average of Grievances in Each Category

Category	1952		1951	
	No.	Avg.	No.	Avg.
IV	2	2.10	1	1.05
IX			1	1.05
TOTAL	2	2.10	2	2.10

No grievances were filed in either 1953 or 1954. Both of the 1951 grievances were settled at Step ONE. Both of the 1952 grievances were settled at Step THREE.

Here is an unbelievably low rate particularly in view of the size of the company. They have seen fit to place the responsibility for industrial relations in the hands of a Vice President. They give credit for the serene atmosphere to excellent communications between management and the bargaining agent plus the fact that a sincere personal interest is taken in each employee. This even extends to finding jobs in other industries for those who are laid off due to a recession.





COMPANY K

Type Industry: Manufacture of heavy equipment,  
continuous

Size: 1050 employees

Bargaining Unit: Internationally affiliated  
Maintenance of membership

Wage Plan: Incentives

Population of Location: over 100,000

Table 19  
Number and Average of Grievances in Each Category

Category	1954		1953		1952	
	No.	Avg.	No.	Avg.	No.	Avg.
I	12	15.00	4	4.00	11	10.00
II	7	8.75	18	18.00	15	13.63
III	9	11.25	8	8.00	23	20.90
IV	26	32.50	22	22.00	24	21.80
V	3	3.75	3	3.00	2	1.82
VI	2	2.50	3	3.00	5	4.55
VII	28	35.00	26	26.00	63	57.26
VIII	9	11.25	3	3.00	21	19.10
IX	3	3.75	19	19.00	5	4.55
X	36	45.00	45	45.00	48	43.62
XI	22	27.50	23	23.00	33	30.00
XII	12	15.00	22	22.00	45	40.90
TOTAL	169	211.25	196	196.00	295	263.13

Table 20  
Number and Percent of Total Grievances  
at Each Level of Settlement

Level	1954		1953		1952	
	No.	%	No.	%	No.	%
ONE	36	21.3	52	26.5	70	23.7
TWO	57	33.7	46	23.4	72	24.4
THREE	75	44.3	97	49.5	151	51.1
ARBIT	1	0.7	1	0.6	2	0.8
TOTAL	169	100.0	196	100.0	295	100.0



Company L

Type Industry: Electrical, semi-continuous  
 Size: 1200 employees  
 Bargaining Unit: Nationally affiliated  
 Union shop  
 Wage Plan: No incentives  
 Population of Location: over 100,000

Table 21  
 Number and Average of Grievances in Each Category

Category	1954		1953		1952	
	No.	Avg.	No.	Avg.	No.	Avg.
I	4	2.64				
II	4	2.64	9	7.50	3	2.61
III	2	1.82	7	.83	5	4.35
IV	5	4.52	1	0.83		
V			1	0.83		
VI	2	1.82	2	1.67		
VII	9	8.18	6	5.00	4	3.48
VIII	2	1.82	3	2.50	2	1.74
X	3	2.73	4	3.33	2	1.74
XI			1	0.83	1	0.87
TOTAL	31	28.19	34	26.32	17	14.79

Table 22  
 Number and Percent of Total Grievances  
 at Each Level of Settlement

Level	1954		1953		1952	
	No.	%	No.	%	No.	%
ONE	0	0.0	6	17.6	4	23.5
TWO	6	19.4	12	35.3	11	64.7
THREE	17	54.8	15	44.2	1	5.9
ARBIT	8	25.8	1	2.9	1	5.9
TOTAL	31	100.0	34	100.0	17	100.0



Company M

Type Industry: Service

Size: 1900 employees

Bargaining Unit: Nationally affiliated  
Maintenance of membership

Wage Plan: No incentives

Population of Location: over 100,000

Table 23  
Number and Average of Grievances in Each Category

Category	1954		1953		1952		1951	
	No.	Avg.	No.	Avg.	No.	Avg.	No.	Avg.
I							1	0.60
II	1	0.53	1	0.55			2	1.20
III	1	0.53	2	1.10	1	0.57		
IV			1	0.55	3	1.71	2	1.20
VI							1	0.60
VII	3	1.58			3	1.71	3	1.80
VIII					2	1.14	1	0.60
IX	1	0.53	1	0.55	2	1.14	1	0.60
X	4	2.10	5	2.75	4	2.28	6	3.60
XI	1	0.53	1	0.55	1	0.57		
TOTAL	11	5.80	11	6.05	16	9.12	17	10.20

Table 24  
Number and Percent of Total Grievances

Level	1954		1953		1952		1951	
	No.	%	No.	%	No.	%	No.	%
ONE								
TWO								
THREE	11	100.0	11	100.0	16	100.0	16	94.1
ARBIT							1	5.9
TOTAL	11	100.0	11	100.0	16	100.0	17	100.0



Company N

Type Industry: Heavy equipment and electrical,  
continuous

Size: 1900 employees

Bargaining Unit: Independent  
Union Shop

Wage Plan: No incentives

Population of Location: 20,000

Table 25  
Number and Average of Grievances in Each Category

Category	1954	
	No.	Avg.
I	1	0.53
II	1	0.53
III	4	2.10
IV	14	7.36
VII	21	11.10
X	3	1.58
XI	2	1.05
TOTAL	46	24.25

All grievances were settled at Level THREE.

It was deemed inadvisable to use this company's data in the overall picture for two reasons. First, records were available for only the last nine months of 1954 and, secondly, no information was available until the grievance reached the General Superintendent and the Union Grievance Committee.





Company 0

Type Industry: Steel, continuous  
 Size: 2300 employees  
 Bargaining Unit: Internationally affiliated  
 Maintenance of membership  
 Wage Plan: Incentives  
 Population of Location: 35,000

Table 26  
 Number Average of Grievances in Each Category

Category	1954		1953		1952		1951	
	No.	Avg.	No.	Avg.	No.	Avg.	No.	Avg.
II	3	1.31	1	0.44	4	1.82	3	1.33
III	1	0.44	1	0.44	1	0.45	2	0.89
IV	5	2.18					8	3.55
VII	5	2.18	2	0.87	5	2.28	7	3.11
IX			2	0.87	2	0.91		
X	8	3.48	8	3.48	10	4.54	1	0.44
XI	1	0.44			1	0.45	3	1.33
XII	1	0.44			3	1.36		
TOTAL	24	10.47	14	6.10	26	11.81	24	10.65

Table 27  
 Number and Percent of Total Grievances  
 at Each Level of Settlement

Level	1954		1953		1952		1951	
	No.	%	No.	%	No.	%	No.	%
ONE	8	33.3	4	28.5	10	38.5	4	16.6
TWO	11	45.9	4	28.5	11	42.3	13	54.2
THREE	5	20.8	6	43.0	5	19.2	7	29.2
ARBIT								
TOTAL	24	100.0	14	100.0	26	100.0	24	100.0



Company P

Type Industry: Electrical, continuous  
 Size: 4000 employees  
 Bargaining Unit: Internationally affiliated  
 Maintenance of membership  
 Wage Plan: No incentives  
 Population of Location: 35,000

Table 28  
 Number and Average of Grievances in Each Category

Category	1954		1953		1952		1951	
	No.	Avg.	No.	Avg.	No.	Avg.	No.	Avg.
I	34	8.10	6	1.58	1	0.29	1	0.31
II	21	5.00	10	2.63	2	0.57	4	1.25
III	26	6.18	10	2.63			3	0.94
IV	45	10.70	20	5.26	2	0.57	2	0.62
V	2	0.48	1	0.26				
VI	12	2.86	24	6.32				
VII	58	13.82	24	6.32	7	2.00	4	1.25
VIII	5	1.19	6	1.58	3	0.86	1	0.31
X	20	4.76	8	2.11				
XI	23	5.47	2	0.53	1	0.29		
XII	8	1.90	4	1.05				
TOTAL	254	60.46	115	20.27	16	4.58	15	4.68

Table 29  
 Number and Percent of Total Grievances  
 at Each Level of Settlement

Level	1954		1953		1952		1951	
	No.	%	No.	%	No.	%	No.	%
ONE	137	54.0	52	45.2	5	31.2	8	53.4
TWO	43	16.9	24	20.9	7	43.8	2	13.3
THREE	59	23.2	19	16.5	4	25.0	5	33.3
ARBIT TABLED	15	5.9	20	17.4				
TOTAL	254	100.0	115	100.0	16	100.0	15	100.0



COMPANY Q

Type Industry: Metalworking and electrical,  
continuous

Size: 4500 employees

Bargaining Unit: Nationally affiliated  
Union shop

Wage Plan: Incentives

Population of Location: over 100,000

Table 30  
Number and Average of Grievances in Each Category

Category	1954		1953		1952		1951	
	No.	Avg.	No.	Avg.	No.	Avg.	No.	Avg.
I	10	2.38	12	1.96	11	1.36	3	0.58
II	22	5.25	84	13.72	63	7.79	11	2.12
III	71	16.90	368	60.10	237	29.30	50	9.61
IV	202	48.20	527	53.50	252	28.68	113	21.73
V	29	6.91	23	3.76	19	2.35	20	3.85
VI	39	9.30	29	4.74	31	3.83	16	3.08
VII	205	48.90	292	47.75	272	33.62	144	27.69
VIII	215	51.25	201	32.85	123	15.20	58	11.15
IX	3	0.71	67	10.95	64	7.91	1	0.19
X	191	45.55	164	26.30	100	12.36	58	11.15
XI	30	7.15	36	5.88	25	3.09	22	4.23
XII	6	1.43	50	8.17	66	8.16	49	9.42
TOTAL	1023	243.93	1653	270.18	1243	153.65	545	104.80

Table 31  
Number and Percent of Total Grievances  
at Each Level of Settlement

Level	1954		1953		1952		1951*	
	No.	%	No.	%	No.	%	No.	%
ONE	167	16.3	198	12.0	172	13.8		
TWO	348	33.9	201	12.2	290	23.3		
THREE	502	49.2	1245	75.3	771	62.1		
ARBIT	6	0.6	9	0.5	10	0.8		
TOTAL	1023	100.0	1653	100.0	1243	100.0		

\*Information on level of settlement not available.



Company R

Type Industry: Electrical, continuous  
 Size: 6000 employees  
 Bargaining Unit: Internationally affiliated  
 Maintenance of membership  
 Wage Plan: Not noted  
 Population of Location: over 100,000

Table 32  
 Number and Average of Grievances in Each Category\*

Category	1954	
	No.	Ave.
I	3	0.50
II	3	0.50
III	14	2.33
IV	25	4.17
V	1	0.17
VI	4	0.66
VII	41	6.83
VIII	3	0.50
IX	1	0.17
X	8	1.33
XI	3	0.50
TOTAL	106	17.66

Table 33  
 Number and Percent of Total Grievances  
 at Each Level of Settlement

Level	1954	
	No.	%
ONE	*	
TWO	66	62.3
THREE	40	37.7
ARBIT		
TOTAL	106	100.0

\*Grievances processed through the first two levels of supervision but not reaching the divisional level of management were not available and hence could not be included.





Company S

Type Industry: Steel, continuous  
 Size: 7500 employees  
 Bargaining Unit: Internationally affiliated  
 Maintenance of membership  
 Wage Plan: Incentives  
 Population of Location: over 100,000

Table 34  
 Number and Average of Grievances in Each Category

Category	1954		1953		1952		1951	
	No.	Avg.	No.	Avg.	No.	Avg.	No.	Avg.
I	51	6.80	10	1.33	7	1.22	4	0.57
II	35	4.67	45	6.00	18	3.10	30	4.29
III	28	3.73	9	1.20	15	2.59	9	1.28
IV	52	6.92	45	6.00	48	8.28	24	3.43
V	11	1.47	7	0.93	6	1.03	4	0.57
VI	5	0.67	1	0.13	1	0.17	5	0.71
VII	73	9.74	61	8.14	40	6.90	49	7.00
VIII	3	0.40	6	0.80	4	0.69	5	0.71
IX	2	0.27	6	0.80			2	0.29
X	29	3.85	55	7.33	44	7.59	34	4.86
XI	30	4.00	22	2.93	6	1.03	12	1.71
XII	19	2.54	30	4.00	11	1.90	13	1.86
TOTAL	338	45.06	297	39.59	200	34.50	191	27.28

Table 35  
 Number and Percent of Total Grievances  
 at Each Level of Settlement

Level	1954		1953		1952		1951*	
	No.	%	No.	%	No.	%	No.	%
ONE	85	25.1	59	19.9	57	28.5		
TWO	73	21.6	32	10.8	39	19.5		
THREE	137	40.6	151	50.8	82	41.0		
ARBIT	43	12.7	55	18.5	22	11.0		
TOTAL	338	100.0	297	100.0	200	100.0		

\*Information on level of settlement not available.



COMPANY T

Type Industry: Electrical, continuous  
 Size: 13,000 employees  
 Bargaining Unit: Internationally affiliated  
 Maintenance of membership  
 Wage Plan: No incentives  
 Population of Location: 50,000

Table 36  
 Number and Average of Grievances in Each Category

Category	1954		1953		1952		1951	
	No.	Avg.	No.	Avg.	No.	Avg.	No.	Avg.
I	91	7.16	69	5.11	40	3.12	35	2.61
II	65	5.11	86	6.37	55	4.30	64	4.73
III	220	17.32	141	10.43	121	9.45	128	9.55
IV	185	14.56	30	2.22	40	3.12	29	2.16
V	22	1.73	56	4.15	32	2.50	31	2.31
VI	137	10.79	105	7.77	39	3.05	71	5.30
VII	125	9.85	101	7.47	132	10.32	116	8.66
VIII	54	4.25	40	2.96	19	1.48	27	2.02
IX	8	0.63	10	0.74	3	0.23	2	0.15
X	35	2.76	137	10.14	113	8.83	102	7.61
XI	205	16.15	150	11.11	87	6.80	118	8.80
XII	91	7.16	52	3.85	23	1.80	35	2.61
TOTAL	1238	97.47	977	72.32	704	55.00	758	56.56

Table 37  
 Number and Percent of Total Grievances  
 at Each Level of Settlement

Level	1954		1953		1952		1951	
	No.	%	No.	%	No.	%	No.	%
ONE	457	36.9	349	35.7	166	23.6	241	31.9
TWO	331	26.8	259	26.5	185	26.3	227	29.9
THREE	230	18.6	142	14.6	93	13.2	128	16.9
ARBIT			1	0.1				
TABLED	220	17.7	226	23.1	260	36.9	162	21.3
TOTAL	1238	100.0	977	100.0	704	100.0	758	100.0



## SUMMARY OF RESULTS AND CONCLUSIONS

Distribution of Cases According to Subject Matter

TABLE 38  
Grievance Number, Average and Rank  
by Category for 1954 and 1953

Category	No.	1954 Avg.	Rank	No.	1953 Avg.	Rank
I	206	5.40	7	101	2.48	11
II	171	4.48	10	270	6.62	5
III	370	9.70	3	550	13.50	1
IV	536	14.05	1	466	11.42	3
V	68	1.78	11	93	2.28	12
VI	199	5.21	8	164	4.02	9
VII	530	13.88	2	544	13.35	2
VIII	290	7.60	6	260	6.38	6
IX	19	0.50	12	110	2.70	10
X	355	9.30	4	449	11.02	4
XI	327	8.57	5	245	6.01	7
XII	176	4.61	9	179	4.39	8
TOTAL	3247	85.08		3431	84.17	
Avg. Employment	38,185			40,755		

Tables 38 and 39 were compiled in the following manner. Disregarding data from Companies M, N and R because they maintained no records of grievances settled in the early steps of the procedure, totals from the seventeen remaining companies make up the "No." column. The "Average Employment" is the total employment of all companies contributing data for that particular year. The "Avg." column is then obtained by dividing the number of grievances by the "Avg. Employment" figure and multiplying the result by one thousand.

It should be noted that the yearly grievance average



Table 39  
Grievance Number, Average and Rank  
by Category for 1952 and 1951

Category	No.	1952 Avg.	Rank	No.	1953 Avg.	Rank
I	73	1.89	11	43	1.23	11
II	168	4.34	6	118	3.38	6
III	402	10.40	2	192	5.50	3
IV	349	9.02	3	179	5.13	4
V	59	1.52	12	55	1.58	10
VI	76	1.97	10	92	2.64	8
VII	532	13.77	1	328	9.40	1
VIII	172	4.45	5	91	2.61	9
IX	82	2.12	9	7	0.20	12
X	321	8.30	4	197	5.64	2
XI	154	3.98	7	156	4.47	5
XII	148	3.83	8	97	2.78	7
TOTAL	2536	65.59		1555	44.56	
Avg. Employment	38,659			34,862		

arrived at in this way permits the larger companies to dominate the results obtained. One way of circumventing this difficulty is to take an average of the company grievance averages. This scheme will be employed for Table 40 in this section.

Perusal of these tables shows that between 1951 and 1954 the grievance average has almost doubled as far as total number of grievances filed is concerned. Practically all of this increase took place between 1951 and 1953 with 1954's average remaining almost identical with that of the previous year.

There were four categories which monopolized the top four places in the rankings throughout the period. Seniority problems (Category VII) were number one for two years and





within an eyelash of the top spot in the other two. Over the four year period the average of this type of grievance has risen close to fifty percent, although similar to the overall totals it levelled off during the last year. In second place, we find Job Classification and Evaluation problems (Category IV), the average of which has been continually on the upswing so that they were the favorite subject of contention during 1954. In third spot are Equalization of Hours problems (Category III), the 1953 leader. After a meteoric rise through that year, the average of this type of grievance dropped off some thirty percent in 1954. Category X problems, having to do with wages seems to be one of the best barometers to use in attempting to predict the overall picture. During each of the four years in question, controversies dealing with wages made up eleven to thirteen percent of all the grievances filed.

The Mean Grievance Average shown in Table 40 was computed in the following manner. All the individual grievance averages in a particular category were summed and divided by the number of participants ( $n_j$ ) for the year in question. It is felt that the use of this scheme helped in preventing one or two large companies with an unusually high or low number of grievances in one particular category from completely overshadowing the data of the remaining participants. Of course, one might argue that using this method could make it possible for one of the smaller companies to contribute more than its share to the overall average.



Table 40  
Mean Grievance Average and Rank  
by Category for 1951 through 1954

Category	1954		1953		1952		1951	
	Avg.	Rank	Avg.	Rank	Avg.	Rank	Avg.	Rank
I	3.13	9	0.82	12	1.92	9	0.37	11
II	3.34	8	4.66	5	3.58	6	1.82	5
III	4.57	6	5.21	4	4.80	4	2.02	4
IV	8.55	3	7.87	3	4.87	3	3.30	2
V	0.93	11	0.94	11	0.55	12	0.61	10
VI	1.82	10	1.29	10	0.83	11	0.83	9
VII	10.02	1	8.91	2	9.55	1	5.24	1
VIII	4.43	7	2.88	8	2.79	8	1.29	7
IX	0.83	12	2.34	9	1.58	10	0.34	12
X	9.89	2	9.15	1	6.50	2	2.55	3
XI	5.17	5	3.82	7	3.04	7	1.65	6
XII	5.20	4	4.20	6	3.87	5	1.26	8
TOTAL	57.88		52.89		43.88		21.28	
n <sub>j</sub>	17		17		14		11	

This cannot be denied.

At this point, a concrete example may help in illustrating why the author is of the opinion that the latter method of computation gives a more accurate indication of the overall picture. From Table 38, we find that in 1954 there were 536 grievances filed in Category IV. The total employment of all companies contributing data was 38,185. Therefore Category IV's grievance average was 14.05 grievances per thousand employees. Let us now take a closer look at the data. From Table 30, we find that Company Q supplied us with 202 Category IV grievances which comprises almost 38 percent of the total filed. However, their average employment for the year was 4,200, just 11



percent of the total employment. This most certainly contributed heavily to this category's No. 1 ranking. To show how misleading this can be let us compute the average in this category for the remaining sixteen participants. They had 334 cases from an average employment of 36,985 persons. This amounts to 9.03 grievances per thousand employees, a far cry from 14.05. Now turning to Table 40, the mean of the grievance averages for this category is found to be 8.55 which appears to be far more representative of all the companies' averages than was the figure originally computed.

There are other instances in all four years which bear out the point illustrated above. Therefore the Mean Grievance Average will be used for all future comparisons in this work.

Returning to Table 40, we find the overall grievance average rising rapidly from 1951 through 1953 and tending to level off in 1954. Over the entire period, problems dealing with Seniority (Category VII), Wages (Category X), Job Classification and Evaluation (Category IV) and Equalization of Hours (Category III) were, in the order mentioned, the most prolific sources of grievances in the industries studied. Of these, the Wages' grievance average ballooned to close to three hundred percent of the 1951 figure, while in the other three categories the averages just about doubled during the period.

Further study of Table 40 indicates that there are



three other categories worthy of mention. They are Working Conditions (Category XI), Supervision Working (Category VIII) and Standards (Category XII). In all three, the averages at least tripled with the Standards' grievance average zooming to over four hundred percent of the 1951 figure.

This portion of the presentation should serve to answer the question posed in the introduction concerning detectable trends in the number and type of grievances filed over the past four years.

Mention was also made in the introduction that in arbitrations, Wages or Job Classification (Categories X and IV), Seniority (Category VII) and Discipline (Category II), in that order, were the issues giving birth to the most cases. However, in this study, Discipline and Discharge grievances combined (Category II) at no time had an average high enough to break into the top four. This would lead one to theorize that in cases dealing with the discharge or discipline of an employee, both management and the union often stand their ground even to arbitration, if necessary.





Distribution of Cases According to Source

Table 41  
Annual Grievance Average of Participants  
for Period 1951 through 1954

Company	1954	1953	1952	1951
A	10.26	20.52		
B	0.00	0.00	5.00	0.00
C	32.72	47.32	36.34	
D	11.34	17.01	0.00	5.67
E	14.56	0.00	8.32	8.32
F	1.26	23.52		
G	1.54	0.00	3.08	1.54
H	200.11	113.94		
I	14.70	37.79	17.02	12.50
J	0.00	0.00	2.10	2.10
K	211.35	196.00	266.13	
L	28.19	28.32	14.79	
M	5.80*	6.05*	9.12*	10.20*
N	2.25*			
O	10.57	1.10	11.81	10.65
P	0.46	20.27	4.52	4.68
Q	243.22	270.10	153.65	104.80
R	17.66*			
S	45.06	39.59	34.50	27.28
T	27.47	72.37	55.00	50.56
n <sub>j</sub>	17	17	14	11
$\bar{x}$	57.88	51.89	43.88	21.28

\*Not included in computation of Mean Annual Grievance Average because data on grievances settled at the lower levels of supervision was not available from these companies.

In Table 41 the Annual Grievance Average of each of the participants is shown. The sum of these averages divided by the number of companies contributing data ( $n_j$ ) gives the Mean Annual Grievance Average ( $\bar{x}$ ). As might be expected this is identical with the Annual Grievance Average computed in Table 40 where the cases were broken down by categories.

At this point an attempt will be made to answer two more of the questions posed in the introduction. First,



just what effect, if any, does the size of the organization have on the overall grievance rate? Second, do wage incentive plans have an effect on the number of grievances which a company's employees file? In addition, it was decided to investigate the small rise in the grievance rate between 1953 and 1954 to see if it was significant. To accomplish this, the data from 1953 and 1954 are stratified into eight cells as shown in Figure 3. The data, as shown, failed to pass the requirement for homogeneity of cell variances. This difficulty was overcome by transforming the variable, Annual Grievance Average, to the  $\text{Log}_{10} (\text{Annual Grievance Average} + 1)$ . Then a slightly modified analysis of variance was carried out, the details of which are presented in Appendix A. Of the three main effects (company size, wage plan in effect and year) and the four interactions (company size X wage plan, company size X year, wage plan X year and company size X wage plan X year), only one was found to be significant at the .05 level of significance. This was the main effect of company size.

From this, it was concluded that companies of one thousand employees or larger had a higher grievance average than companies with less than a thousand employees.



Figure 3  
Arrangement of Annual Grievance Averages  
for Statistical Analysis

Large Companies		Small Companies	
Incentive	Non-Incentive	Incentive	Non-Incentive
Cell I	Cell II	Cell III	Cell IV
196.00	28.32	0.00	20.52
1 6.10	30.27	43.62	0.00
9 270.18	72.32	17.01	23.52
5 39.59		0.00	37.79
3		113.94	0.00
$\bar{x}_1 = 127.97$	$\bar{x}_2 = 62.04$	$\bar{x}_3 = 34.91$	$\bar{x}_4 = 16.37$
Cell V		Cell VII	
Cell VI		Cell VIII	
211.25	28.19	0.00	10.26
1 10.47	60.46	32.73	14.56
9 243.93	97.47	11.34	1.96
5 45.06		1.54	14.70
4		200.11	0.00
$\bar{x}_5 = 127.68$	$\bar{x}_6 = 62.02$	$\bar{x}_7 = 49.14$	$\bar{x}_8 = 8.30$



This is not at all surprising because as the size of the organization increases lines of communication become longer, more strained and more formal. This results in the putting into writing of grievances which, in a smaller company, might conceivably have been settled verbally.

Any attempt to draw further conclusions from the results of the statistical analysis would be rather risky. In spite of the fact that no significant difference was found between the grievance averages of companies with and without wage incentives, it would be extremely rash to say they have no effect on the average. It must be kept in mind that this is a very limited sample and that the data exhibit considerable variability. As a result of this, the differences had to be very great in order to show up as significant in the analysis of variance.

Once again, in the introduction it was stated that some were of the opinion that an upswing takes place in the number of grievances filed during, or in the period just prior to, contract negotiations. In order to investigate this, participants were selected on the following basis. First, a sufficient number of grievances had to be filed during the year so as to make a monthly grievance average meaningful. Second, contract negotiations had to take place one or more times in the period for which data were compiled. Five companies (I, K, L, Q and S) satisfied these two conditions. In one of these, Company K, the monthly





grievance average rose to twice the normal figure during the four months prior to contract expiration. This was in evidence for both the 1952 and 1954 negotiations. However, investigation of the data from the remaining four companies showed just the opposite to be true. Here, the monthly grievance average for the period in question was slightly below that recorded for the remainder of the year.

From this, it can be deduced that, in some instances, labor uses the grievance procedure to prod management just prior to and during contract negotiation time. However, it appears that this practice is prevalent in a minority of the situations studied.

In conclusion, the author is aware that there are many other factors which could have as much, or even more, bearing on the grievance average than did those investigated. Among these could be included affiliation of the bargaining unit, past history of labor-management relations, selection and placement policy, type of working environment and the size of the community in which the plant is located.

To illustrate one of the possibilities, let us investigate the last factor mentioned, community size. Of the seventeen companies investigated in 1954, eight (C, E, J, K, L, Q, S and T) are located in cities whose population is 50,000 or more. The Mean 1954 Grievance Average for these eight companies is 64.15 compared to 57.88 overall and 34.54 for the remaining nine companies



which are located in communities of less than 50,000 population. However, further investigation shows that five (K, L, Q, S and T) of these eight are included in the "Large Company" category and we have already concluded that this group has a grievance average significantly higher than that of the small companies.

The above illustration was inserted to emphasize the point that, if further research is conducted in this area, the sample size should be considerably larger so that some of the above mentioned factors can be included in the statistical analysis without reducing the number of readings in each cell below an acceptable minimum.



Distribution of Cases According to Level of Settlement

Table 42  
Number of Grievances and Percentage  
at Each Level of Settlement

Level	1954		1953		1952		1951	
	No.	%	No.	%	No.	%	No.	%
ONE	939	28.9	784	22.8	497	19.6	267	32.6
TWO	930	28.7	615	17.9	627	24.8	249	30.4
THREE	1083	33.4	1715	50.0	1115	43.9	141	17.2
ARBIT	60	1.3	71	2.1	37	1.5	0	0.0
TOTAL	235	7.2	246	7.2	260	10.2	162	19.8
TOTAL	3247	100.0	3431	100.0	2536	100.0	819*	100.0

\*In 1951, level of settlement data was not procured from companies Q and S. This accounts for the discrepancy between this total and the one for the same year shown in Table 39.

All of the grievances investigated in each year are categorized in Table 42 according to the level at which they were settled.

In the interest of clarity, the definitions of levels one, two and three will again be presented here. The criterion used for categorizing was the management level involved in the decision. ONE, comprised all lower levels of supervision; TWO, the plant superintendent, works manager or equivalent; THREE, top management. It was necessary to do this because the participants had a variety of three, four and five step grievance procedures which would have thoroughly complicated tabulation of the level of settlement.

Once again, in order to prevent a minority of the



Table 43  
Mean Percentage of Grievances  
at Each Level of Settlement

Level	1954	1953	1952	1951
ONE	25.7	28.0	24.2	48.2
TWO	36.0	25.7	40.8	35.1
THREE	31.8	40.3	29.2	14.1
ARBIT	4.9	2.9	3.0	0.0
TABLED	1.6	3.1	2.8	2.6
TOTAL	100.0	100.0	100.0	100.0

participants from exerting too much effect on the overall results, the means of all companies percentages at each level for a particular year were computed and tabulated in Table 43. As before, it is felt that this technique enables the smaller companies to exert some influence on the results.

Comparison of the data presented in Table 42 for the years 1951 and 1953 may prove to be of interest. In 1951, some 63 percent of the grievances filed were settled at levels one and two. By 1953, this figure had dropped to 40.7 percent. Since there was no appreciable increase in the percentage going to arbitration, the top management level settled one-half of the cases. No doubt, because of this the cost per grievance rose to two or three times that of 1951. However, looking on to the 1954 data, the trend has reversed to the extent that just about one-third of the grievances were settled at level three. Perusal of the comparable mean percentages in Table 43 for the same period investigated above indicates approximately the same situation





with the exception that in 1953 level three's percentage was just slightly over forty.



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## BIBLIOGRAPHY

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## APPENDIX





## APPENDIX A

Solution of the Statistical Problem

Model:

$$Y_{ijkl} = M + S_i + W_j + A_k + I_{ij} + I_{ik} + I_{jk} + R_{ijkl}$$

Where

$Y_{ijkl}$  = Annual Grievance Average

$M$  = Common effect

$S_i$  = Effect of Company Size (large or small)

$W_j$  = Effect of Wage Plan (incentive or non-incentive)

$A_k$  = Annum effect (1953 or 1954)

$I_{ij}$  = Effect of interaction between Company Size and Wage Plan

$I_{ik}$  = Effect of interaction between Company Size and Years

$I_{jk}$  = Effect of interaction between Wage Plan and Years

$R_{ijkl}$  = Residual effect including error and three factor interaction effects

The data as presented in Figure 3 failed to satisfy Bartlett's Test for homogeneity of variance. Therefore, a transformation to  $\log(Y_{ijkl} + 1)$  was used. The cell designations remained the same. This transformation resulted in the following:



Cell	I	II	III	IV
	2.2944.6	1.467144	0.00	1.332842
	0.851258	1.495128	1.649530	0.00
	2.431258	1.665222	1.255514	1.389520
	1.606419		0.00	1.588720
			2.060471	0.00

$T_c$	7.187401	4.827514	4.965515	4.311082
$n_c$	4	3	5	5
$T_c$	1.796850	1.609171	0.993103	0.862216
$(\sum Y^2)_c$	14.496971	7.867031	8.542805	6.231265
$T_c^2/n_c$	12.914684	7.768297	4.931268	3.717086
$(SS_w)_c$	1.582287	0.098734	3.611537	2.514179
$S_c^2$	0.527429	0.049367	0.902884	0.628545

Cell	V	VI	VII	VIII
	2.326847	1.465234	0.00	1.051538
	1.059563	1.788593	1.528016	1.192010
	2.389042	1.993304	1.091315	0.471292
	1.663324		0.404824	1.195900
			2.303434	0.00

$T_c$	7.438776	5.247131	5.327599	3.910740
$n_c$	4	3	5	5
$T_c$	1.849694	1.749044	1.065520	0.782148
$(\sum Y^2)_c$	15.011059	9.319236	8.995500	4.178913
$T_c^2/n_c$	13.833647	9.177461	5.676662	3.058777
$(SS_w)_c$	1.177212	0.141775	3.318838	1.120136
$S_c^2$	0.392404	0.070888	0.829709	0.280034

T..... = 42.215758

N = 34



## Definitions of Symbols used:

$T_c$	Summation of the observations in Cell C
$n_c$	Number of observations in Cell C
$\bar{Y}_c$	Mean of observations in Cell C
$(\sum Y^2)_c$	Summation of the squares of the observations in Cell C
$T_c^2$	Square of the summation of the observations in Cell C
$(SS_w)_c$	Sum of squares within cell C which is equal to $(\sum Y)_c - T_c/n_c$
$S_c^2$	Variance of Cell C which is equal to $(SS_w)_c / n_c - 1$
$T....$	Summation of observations in all cells
$N$	Total number of observations
$c$	Cell designation ranging from i to viii

Cell variances now satisfied Bartlett's Test for homogeneity and it is permissible to proceed with the analysis of variance.

Calculation of correction term:

$$C.T. = \frac{T^2}{N} = 54.929462$$

Total sum of squares

$$= \sum \sum \sum \sum Y_{ijkl}^2 - C.T.$$

$$= 74.342780 - C.T. = 19.713318$$

Sum of squares between large and small companies:

$$= \frac{(T_i + T_{ii} + T_v + T_{vi})^2}{14} + \frac{(T_{iii} + T_{iv} + T_{vii} + T_{viii})^2}{20} - C.T.$$

$$= 43.580757 + 17.140143 - C.T.$$

$$= 5.791438 = SS( Co. )$$



Sum of squares between wage plans:

$$= \frac{(T_i + T_{iii} + T_v + T_{vii})^2}{18} + \frac{(T_{ii} + T_{iv} + T_{vi} + T_{viii})^2}{16} - C.T.$$

$$= 34.498392 + 20.922544 - C.T.$$

$$= 0.491474 = SS(W.P.)$$

Sum of squares between years:

$$= \frac{(T_i + T_{ii} + T_{iii} + T_{iv})^2}{17} + \frac{(T_v + T_{vi} + T_{vii} + T_{viii})^2}{17} - C.T.$$

$$= 26.666381 + 28.274856 - C.T.$$

$$= 0.011775 = SS(A)$$

Sum of squares for Company Size x Years interaction:

$$= \frac{(T_i + T_2)^2}{7} + \frac{(T_{iii} + T_{iv})^2}{10} + \frac{(T_v + T_{vi})^2}{7} + \frac{(T_{vii} + T_{viii})^2}{10}$$

$$- C.T. - SS(Co) - SS(A)$$

$$= 60.753132 - C.T. - 5.791438 - 0.011775$$

$$= 0.020457 = SS(Co \times A)$$

Sum of squares for wage plans x years interaction:

$$= \frac{(T_i + T_{iii})^2}{9} + \frac{(T_{ii} + T_{iv})^2}{8} + \frac{(T_v + T_{vii})^2}{9} + \frac{(T_{vi} + T_{viii})^2}{8}$$

$$- C.T. - SS(W.P.) - SS(A)$$

$$= 55.441867 - C.T. - 0.491474 - 0.011775$$

$$= 0.009156 = SS(W.P. \times A)$$

Sum of squares for companies x wage plans:

$$= \frac{(T_i + T_v)^2}{8} + \frac{(T_{ii} + T_{vi})^2}{6} + \frac{(T_{iii} + T_{vii})^2}{10} + \frac{(T_{iv} + T_{viii})^2}{10}$$

$$- C.T. - SS(Co) - SS(W.P.)$$

$$= 61.011700 - C.T. - 5.791438 - 0.491474$$

$$= SS(Co \times A) = 0.200674$$

This we recognize as an impossibility.





For this portion of the analysis, the eight cells are telescoped into four cells as indicated below. The numbers indicate the sum of observations for each new cell. The numbers in parentheses indicate the number of observations which were taken to make up this sum.  $\bar{X}$  is the mean of the new cell.

	Large Companies	Small Companies
Incentive	14.626177 (8) $\bar{x} = 1.828272$	10.293114 (10) $\bar{x} = 1.029311$
Non-Incentive	10.074646 (6) $\bar{x} = 1.679108$	8.221822 (10) $\bar{x} = 0.822182$

Since we are faced with an unequal number of observations in the large company cells, it is necessary to resort to a technique similar to that outlined in Dr. Hicks' article.<sup>9</sup> Here we take the difference between row means and call this D. Then a weighting factor, W is found by taking the ratio of the product of the number of observations in these cells to the sum of the same. Multiplying D and W gives us the weighted difference, DW. Following this procedure we have:

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9. Hicks, C.R., Analysis of Variance When the Numbers of Observations in the Subgroups are Unequal; Industrial Quality Control, Vol. X, No. 6, May 1954.



D	W	DW
	$\frac{8 \times 10}{18} =$	3.550938
0.798961	4.444	
	$\frac{6 \times 10}{16} =$	3.213472
0.856926	3.750	
	$\Sigma W = 8.194$	$\Sigma DW = 6.764410$

$$\frac{(\Sigma DW)^2}{\Sigma W} = P = 5.584238$$

Returning to our impossible situation, we now substitute

P for SS(Co):

$$61.011700 - C.T. - 5.584238 - 0.491474 =$$

$$SS(Co \times W.P.) = 0.006526$$

Now, not only is the interaction affected by having unequal numbers of observations in the cells, but the main effects are also different.

$$SS(Co) \text{ now} = P = 5.584238,$$

$$SS(W.P.) = 0.491474 - (SS(Co) \text{ original} - P)$$

Further more, this also alters the two interaction sum of squares previously computed.

$$SS(Co \times A) = 0.227657$$

$$SS(W.P. \times A) = 0.216356$$

Residual Sum of Squares

$$= SS(\text{Total}) - SS(Co) - SS(W.P.)$$

$$- SS(A) - SS(Co \times A) - SS(W.P. \times A) - SS(Co \times W.P.)$$

$$= 13.382492$$



Analysis of Variance Table

<u>Source</u>	<u>d.f.</u>	<u>Sum of Squares</u>	<u>Mean Square</u>
TOTAL	33	19.713318	xxxxxxx
Between Co.'s	1	5.584238	5.584238
Between Plans	1	0.284274	0.284274
Between Years	1	0.011775	0.011775
Co. x A	1	0.227657	0.227657
W.P. x A	1	0.216356	0.216356
Co. x W.P.	1	0.006526	0.006526
Residual	27	13.382492	0.495648

Choosing a significance level of .05 we will test each mean square against the residual. However, it is immediately apparent that all of them, with the exception of the Between Companies mean square, will result in a ratio less than 1 when tested. Therefore, these are not significant. Testing the Between Companies mean square,

$$F_{1,27} = \frac{5.584238}{0.495648} = 11.27$$

$$F_{.95}(1,27) = 4.22$$

Therefore, we reject, at the .05 level of significance, the hypothesis that the observations for large and for small companies came from populations whose means were the same.









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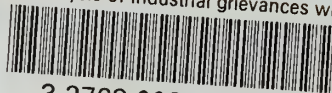
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